

TECHNICAL DATA SHEET

Antibiotic Assay Medium A

Principle

The media is composed of peptone, tryptone, yeast extract, meat extract, dextrose and agar. Peptone, tryptone, yeast extract and meat extract provide nitrogen, vitamins essential nutrients. Dextrose serves as energy source. Agar is solidifying agent. This medium is used as seed agar, maintenance agar for the different variety of test microbes. Antibiotic assay medium A is excellent medium for antibiotic diffusion and gives well defined zones of inhibition. Freshly prepared plates should be used for antibiotic assays. This medium is widely employed as seed agar in the preparation of plates for microbiological agar diffusion assays.

Use: For microbiological diffusion assay of several antibiotics in accordance with EP.

Contents*

Ingredients	Gram/Liter
Peptone	6.000
Tryptone	4.000
Yeast Extract	3.000
Meat Extract#	1.500
Dextrose	1.000
Agar	15.000
pH at 25°C	6.55 ± 0.05

* Formula adjusted for optimum performance and parameters

Equivalent to Beef Extract

Directions: Dissolve 30.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Recommended for the seed agar, maintenance agar for the different variety of test microbes *etc.*

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Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 5.70% solution	6.55 ±0.05 at 25 °C
pH	6.50-6.60
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 33-37 °C for 18-48 h
Indicative properties	Optimum at ≤ 100 CFU at 33-37 °C for 18-24 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Prepare media as per the label directions. Inoculate and incubate the plates at 35 ± 2.0°C for 18-24 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery	Antibiotic assayed
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	≥80%	Cephalosporin
<i>Bacillus subtilis</i>	6633	50-100	Luxuriant	≥80%	Streptomycin
<i>Bacillus pumilus</i>	14884	50-100	Luxuriant	≥80%	Chlortetracycline
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	≥80%	Tetracycline

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. *Indian Pharmacopeia (2010), Ministry of Health and Family welfare, Govt of India, New Delhi.*
2. *Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, (1983) Title 21, Part 436, Subpart D, Washington, D.C.: U.S. Government Printing Office, paragraphs 436, 100436, 106, p. 242-259.*

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